



ALS Environmental
ALS Group USA, Corp
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www.alsglobal.com

June 01, 2017

Analytical Report for Service Request No: K1704253

Lynda Lombardi
AMEC Foster Wheeler Environment & Infrastructure Inc.
10940 White Rock Road
Suite 190
Rancho Cordova, CA 95670

RE: Leviathan Mine RI/FS / 0013091150

Dear Lynda,

Enclosed are the results of the sample(s) submitted to our laboratory April 29, 2017
For your reference, these analyses have been assigned our service request number **K1704253**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp dba ALS Environmental


Kelley Lovejoy
Project Manager



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ALS Group USA, Corp
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Kelso, WA 98626
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Acronyms

| | |
|------------|--|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

| Agency | Web Site | Number |
|--------------------------|---|---------------|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L14-51 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjllabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdwlabservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

ALS ENVIRONMENTAL

| | | | |
|-----------------------|--|-----------------------------|----------|
| Client: | AMEC Foster Wheeler Environment & Infra. | Service Request No.: | K1704253 |
| Project: | Leviathan Mine RI/FS/0013091150 | Date Received: | 04/29/17 |
| Sample Matrix: | Water | | |

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

One water sample was received for analysis at ALS Environmental on 04/29/17. The sample was received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

No anomalies associated with the analysis of these samples were observed.

Approved by _____

Kelley Lovejoy



Chain of Custody

ALS Environmental—Kelso Laboratory
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www.alsglobal.com



Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1BP/ARC Project Name: Leviathan Mine RI/FSReq Due Date (mm/dd/yy): _____ Rush TAT: Yes _____ No X

BP/ARC Facility No: _____

Lab Work Order Number: _____

| | | | | | | | | | | | | | | | | | | | |
|---|--------------------|----------------|-------------|---|----------------|-------------|----------------------------|--|--------------------------------|------------------|----------|---------------------------|--|---|----------------|-----------------------------------|-----------|-------------|--|
| Lab Name: ALS Environmental | | | | BP/ARC Facility Address: Leviathan Mine | | | | Consultant/Contractor: Amec Foster Wheeler | | | | | | | | | | | |
| Lab Address: 1317 South 13th Avenue, Kelso, WA 98626 | | | | City, State, ZIP Code: Alpine County, California | | | | Consultant/Contractor Project No: 0013091150 OnProp | | | | | | | | | | | |
| Lab PM: Kelley Lovejoy | | | | Lead Regulatory Agency: U.S. EPA Region IX | | | | Address: 10940 White Rock Rd, Ste 190, Rancho Cordova, CA 95670 | | | | | | | | | | | |
| Lab Phone: 360-577-7222 | | | | California Global ID No.: NA | | | | Consultant/Contractor PM: Marc Lombardi | | | | | | | | | | | |
| Lab Shipping Acct: 1102-6855-6 (ALS Acct #) | | | | Enfos Proposal No: D013P-0019 Work Release No: WR312386 | | | | Phone: 916-636-3200 | | | | | | | | | | | |
| Lab Bottle Order No: NA | | | | Accounting Mode: Provision <u>X</u> OOC-BU _____ OOC-RM _____ | | | | Email Report/EDD To: Maria Barajas (maria.barajas@amecfw.com) | | | | | | | | | | | |
| Other Info: Storm Water & Snowmelt Monitoring | | | | Stage: 4_Execute Activity: Spend | | | | Invoice To: BP/ARC <u>X</u> Contractor: _____ | | | | | | | | | | | |
| BP/ARC EBM: Anthony Brown | | | | Matrix | | | | No. Containers / Preservative | | | | Requested Analyses | | | | Report Type & QC Level | | | |
| EBM Phone: 714-228-6770 | | | | | | | | | | | | | | | | Standard <u>X</u> | | | |
| EBM Email: anthony.brown@bp.com | | | | | | | | | | | | | | | | Full Data Package _____ | | | |
| Lab No. | Sample Description | Date | Time | Soil / Solid | Water / Liquid | Air / Vapor | Total Number of Containers | Unpreserved | H ₂ SO ₄ | HNO ₃ | HCl | Methanol | Diss Metals (EPA 200.7/ EPA 200.8/EPA 245.1) | Total Metals (EPA 200.7/ EPA 200.8/EPA 245.1) | TSS (SM 2540D) | TDS (SM 2540C) | MS/MSD/LD | Comments | |
| | SWL04281701 | 4/28/17 | 1015 | X | | | 2 | 0 | 0 | 2 | 0 | 0 | X | X | | | | | Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description. |
| | | | | | | | | | | | | | | | | | | | Dissolved metals samples are filtered |
| | | | | | | | | | | | | | | | | | | | in the field. |
| | | | | | | | | | | | | | | | | | | | Metals are: Al, Sb, As, Ba, Be, Cd, Cr, |
| | | | | | | | | | | | | | | | | | | | Co, Cu, Pb, Ni, Se, Ag, Ti, V, Zn (200.8); |
| | | | | | | | | | | | | | | | | | | | Fe, Mn (200.7); Hg (245.1). |
| | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | |
| Sampler's Name: Annie Berlinghieri | | | | Relinquished By / Affiliation | | | | Date | | Time | | Accepted By / Affiliation | | | | Date | | Time | |
| Sampler's Company: Amec Foster Wheeler | | | | Annie Berlinghieri AFEN | | | | 4/28/17 | | 1030 | | [Signature] ALS | | | | 4/28/17 | | 1050 | |
| Shipment Method: Fedex Ship Date: 4/28/17 | | | | [Signature] | | | | 4/28/17 | | 1050 | | [Signature] | | | | 4/28/17 | | 1050 | |
| Shipment Tracking No: 8112889109169 | | | | | | | | | | | | | | | | | | | |
| Special Instructions: | | | | | | | | | | | | | | | | | | | |
| THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | | | | Temp Blank: Yes / No | | | | Cooler Temp on Receipt: _____ °F/C | | | | Trip Blank: Yes / No | | | | MS/MSD Sample Submitted: Yes / No | | | |



PC

KL

Cooler Receipt and Preservation Form

Client Amece Service Request K17 04253
Received: 4/29/17 Opened: 4/29/17 By: CG Unloaded: 4/29/17 By: CG

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Raw Cooler Temp | Corrected Cooler Temp | Raw Temp Blank | Corrected Temp Blank | Corr. Factor | Thermometer ID | Cooler/COC ID | Tracking Number | NA | Filed |
|-----------------|-----------------------|----------------|----------------------|--------------|----------------|---------------|-----------------|----|-------|
| 5.4 | 5.3 | 6.4 | 6.3 | -0.1 | 375 | NA | 8112 8891 0969 | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
If applicable, tissue samples were received: Frozen Partially Thawed Thawed
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---------------------|------------------|----------------|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head- space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|-----------|-----------------------------|----------------|----------------|-------|----|---------|-----------------|-----------------------|----------|------|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Notes, Discrepancies, & Resolutions: Temp okay - metals analysis room temp storage



Metals

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Sample Name: STWL04281701
Lab Code: K1704253-001

Service Request: K1704253
Date Collected: 04/28/17 10:15
Date Received: 04/29/17 10:30

Basis: NA

Dissolved Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---------------------|------------------------|----------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Aluminum | 200.7 | 34000 | ug/L | 11 | 4 | 1 | 05/10/17 13:29 | 05/04/17 | |
| Antimony | 200.8 | 0.135 | ug/L | 0.050 | 0.020 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Arsenic | 200.8 | 198 | ug/L | 0.50 | 0.08 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Barium | 200.8 | 619 | ug/L | 0.050 | 0.020 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Beryllium | 200.8 | 26.2 | ug/L | 0.020 | 0.004 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Cadmium | 200.8 | 0.013 J | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Chromium | 200.8 | 37.7 | ug/L | 0.20 | 0.04 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Cobalt | 200.8 | 145 | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Copper | 200.8 | 193 | ug/L | 0.10 | 0.03 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Iron | 200.7 | 29700 | ug/L | 21 | 3 | 1 | 05/10/17 13:29 | 05/04/17 | |
| Lead | 200.8 | 29.2 | ug/L | 0.020 | 0.002 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Manganese | 200.7 | 935 | ug/L | 1.1 | 0.07 | 1 | 05/10/17 13:29 | 05/04/17 | |
| Mercury | 245.1 | 6.16 | ug/L | 0.40 | 0.04 | 2 | 05/04/17 13:04 | 05/04/17 | |
| Nickel | 200.8 | 196 | ug/L | 0.20 | 0.04 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Selenium | 200.8 | 9.1 | ug/L | 1.0 | 0.07 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Silver | 200.8 | 0.011 J | ug/L | 0.020 | 0.005 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Thallium | 200.8 | 24.5 | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Vanadium | 200.8 | 201 | ug/L | 0.20 | 0.03 | 1 | 05/16/17 09:25 | 05/04/17 | |
| Zinc | 200.8 | 470 | ug/L | 2.0 | 0.2 | 1 | 05/16/17 09:25 | 05/04/17 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Sample Name: STWL04281701
Lab Code: K1704253-001

Service Request: K1704253
Date Collected: 04/28/17 10:15
Date Received: 04/29/17 10:30

Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---------------------|------------------------|----------------|--------------|------------|------------|-------------|----------------------|-----------------------|----------|
| Aluminum | 200.7 | 34100 | ug/L | 11 | 4 | 1 | 05/10/17 13:17 | 05/04/17 | |
| Antimony | 200.8 | 0.047 J | ug/L | 0.050 | 0.020 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Arsenic | 200.8 | 197 | ug/L | 0.50 | 0.08 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Barium | 200.8 | 618 | ug/L | 0.050 | 0.020 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Beryllium | 200.8 | 26.5 | ug/L | 0.020 | 0.004 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Cadmium | 200.8 | 0.010 J | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Chromium | 200.8 | 38.2 | ug/L | 0.20 | 0.04 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Cobalt | 200.8 | 145 | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Copper | 200.8 | 193 | ug/L | 0.10 | 0.03 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Iron | 200.7 | 29100 | ug/L | 21 | 3 | 1 | 05/10/17 13:17 | 05/04/17 | |
| Lead | 200.8 | 29.5 | ug/L | 0.020 | 0.002 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Manganese | 200.7 | 950 | ug/L | 1.1 | 0.07 | 1 | 05/10/17 13:17 | 05/04/17 | |
| Mercury | 245.1 | 6.32 | ug/L | 0.40 | 0.04 | 2 | 05/04/17 13:09 | 05/04/17 | |
| Nickel | 200.8 | 195 | ug/L | 0.20 | 0.04 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Selenium | 200.8 | 9.3 | ug/L | 1.0 | 0.07 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Silver | 200.8 | 0.006 J | ug/L | 0.020 | 0.005 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Thallium | 200.8 | 24.7 | ug/L | 0.020 | 0.006 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Vanadium | 200.8 | 201 | ug/L | 0.20 | 0.03 | 1 | 05/16/17 09:03 | 05/04/17 | |
| Zinc | 200.8 | 470 | ug/L | 2.0 | 0.2 | 1 | 05/16/17 09:03 | 05/04/17 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ1705328-01

Service Request: K1704253
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|-----|------|------|----------------|----------------|---|
| Aluminum | 200.7 | ND U | ug/L | 11 | 4 | 1 | 05/10/17 12:38 | 05/04/17 | |
| Iron | 200.7 | ND U | ug/L | 21 | 3 | 1 | 05/10/17 12:38 | 05/04/17 | |
| Manganese | 200.7 | 0.2 J | ug/L | 1.1 | 0.07 | 1 | 05/10/17 12:38 | 05/04/17 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ1705327-01

Service Request: K1704253
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|-------|-------|------|----------------|----------------|---|
| Antimony | 200.8 | ND U | ug/L | 0.050 | 0.020 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Arsenic | 200.8 | ND U | ug/L | 0.50 | 0.08 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Barium | 200.8 | ND U | ug/L | 0.050 | 0.020 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Beryllium | 200.8 | ND U | ug/L | 0.020 | 0.004 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Cadmium | 200.8 | ND U | ug/L | 0.020 | 0.006 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Chromium | 200.8 | ND U | ug/L | 0.20 | 0.04 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Cobalt | 200.8 | ND U | ug/L | 0.020 | 0.006 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Copper | 200.8 | ND U | ug/L | 0.10 | 0.03 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Lead | 200.8 | ND U | ug/L | 0.020 | 0.002 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Nickel | 200.8 | ND U | ug/L | 0.20 | 0.04 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Selenium | 200.8 | ND U | ug/L | 1.0 | 0.07 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Silver | 200.8 | ND U | ug/L | 0.020 | 0.005 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Thallium | 200.8 | ND U | ug/L | 0.020 | 0.006 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Vanadium | 200.8 | ND U | ug/L | 0.20 | 0.03 | 1 | 05/16/17 07:57 | 05/04/17 | |
| Zinc | 200.8 | ND U | ug/L | 2.0 | 0.2 | 1 | 05/16/17 07:57 | 05/04/17 | |

ALS Group USA, Corp.
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Analytical Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ1705329-01

Service Request: K1704253
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|------|------|------|----------------|----------------|---|
| Mercury | 245.1 | ND U | ug/L | 0.20 | 0.02 | 1 | 05/04/17 12:37 | 05/04/17 | |

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Collected: 04/28/17
Date Received: 04/29/17
Date Analyzed: 05/10/17

Replicate Sample Summary**Total Metals**

Sample Name: STWL04281701

Units: ug/L

Lab Code: K1704253-001

Basis: NA

| Analyte Name | Analysis Method | MRL | MDL | Sample Result | Duplicate Sample | Average | RPD | RPD Limit |
|--------------|-----------------|-----|------|---------------|---------------------|---------|-----|-----------|
| | | | | | KQ1705328-06 Result | | | |
| Aluminum | 200.7 | 11 | 4 | 34100 | 33800 | 34000 | <1 | 20 |
| Iron | 200.7 | 21 | 3 | 29100 | 28900 | 29000 | <1 | 20 |
| Manganese | 200.7 | 1.1 | 0.07 | 950 | 939 | 944 | 1 | 20 |

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Superset Reference:

ALS Group USA, Corp.

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Collected: 04/28/17
Date Received: 04/29/17
Date Analyzed: 05/16/17

Replicate Sample Summary
Total Metals

Sample Name: STWL04281701
Lab Code: K1704253-001

Units: ug/L
Basis: NA

| Analyte Name | Analysis Method | MRL | MDL | Sample Result | Duplicate Sample | Average | RPD | RPD Limit |
|--------------|-----------------|-------|-------|---------------|---------------------|---------|------|-----------|
| | | | | | KQ1705327-06 Result | | | |
| Antimony | 200.8 | 0.050 | 0.020 | 0.047 J | 0.029 J | 0.038 | 49 # | 20 |
| Arsenic | 200.8 | 0.50 | 0.08 | 197 | 192 | 194 | 3 | 20 |
| Barium | 200.8 | 0.050 | 0.020 | 618 | 593 | 606 | 4 | 20 |
| Beryllium | 200.8 | 0.020 | 0.004 | 26.5 | 25.3 | 25.9 | 5 | 20 |
| Cadmium | 200.8 | 0.020 | 0.006 | 0.010 J | 0.008 J | 0.009 | 23 # | 20 |
| Chromium | 200.8 | 0.20 | 0.04 | 38.2 | 36.6 | 37.4 | 4 | 20 |
| Cobalt | 200.8 | 0.020 | 0.006 | 145 | 141 | 143 | 3 | 20 |
| Copper | 200.8 | 0.10 | 0.03 | 193 | 187 | 190 | 3 | 20 |
| Lead | 200.8 | 0.020 | 0.002 | 29.5 | 28.6 | 29.1 | 3 | 20 |
| Nickel | 200.8 | 0.20 | 0.04 | 195 | 191 | 193 | 2 | 20 |
| Selenium | 200.8 | 1.0 | 0.07 | 9.3 | 8.9 | 9.1 | 4 | 20 |
| Silver | 200.8 | 0.020 | 0.005 | 0.006 J | ND U | NC | NC | 20 |
| Thallium | 200.8 | 0.020 | 0.006 | 24.7 | 23.9 | 24.3 | 3 | 20 |
| Vanadium | 200.8 | 0.20 | 0.03 | 201 | 196 | 198 | 3 | 20 |
| Zinc | 200.8 | 2.0 | 0.2 | 470 | 457 | 464 | 3 | 20 |

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Superset Reference:

ALS Group USA, Corp.

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253**Date Collected:** 04/28/17**Date Received:** 04/29/17**Date Analyzed:** 05/04/17**Replicate Sample Summary****Total Metals****Sample Name:** STWL04281701**Units:** ug/L**Lab Code:** K1704253-001**Basis:** NA

| Analyte Name | Analysis Method | MRL | MDL | Sample Result | Duplicate Sample | Average | RPD | RPD Limit |
|--------------|-----------------|------|------|---------------|---------------------|---------|-----|-----------|
| | | | | | KQ1705329-05 Result | | | |
| Mercury | 245.1 | 0.40 | 0.04 | 6.32 | 6.66 | 6.49 | 5 | 20 |

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Superset Reference:

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Collected: 04/28/17
Date Received: 04/29/17
Date Analyzed: 05/10/17
Date Extracted: 05/4/17

**Duplicate Matrix Spike Summary
Total Metals**

Sample Name: STWL04281701
Lab Code: K1704253-001
Analysis Method: 200.7
Prep Method: EPA CLP-METALS ILM04.0

Units: ug/L
Basis: NA

| Analyte Name | Matrix Spike KQ1705328-07 | | | | Duplicate Matrix Spike KQ1705328-08 | | | | % Rec Limits | RPD | RPD Limit |
|--------------|------------------------------|--------|-----------------|-------|--|-----------------|-------|--------|-----------------|-----|--------------|
| | Sample Result | Result | Spike Amount | % Rec | Result | Spike Amount | % Rec | | | | |
| Aluminum | 34100 | 35500 | 2000 | 67 # | 35400 | 2000 | 62 # | 70-130 | <1 | | 20 |
| Iron | 29100 | 31100 | 1000 | 202 # | 30100 | 1000 | 101 # | 70-130 | 3 | | 20 |
| Manganese | 950 | 1450 | 500 | 100 | 1400 | 500 | 89 | 70-130 | 4 | | 20 |

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Superset Reference:

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Collected: 04/28/17
Date Received: 04/29/17
Date Analyzed: 05/16/17
Date Extracted: 05/4/17

Duplicate Matrix Spike Summary
Total Metals

Sample Name: STWL04281701
Lab Code: K1704253-001
Analysis Method: 200.8
Prep Method: EPA CLP-METALS ILM04.0

Units: ug/L
Basis: NA

| Analyte Name | Sample Result | Matrix Spike KQ1705327-07 | | | Duplicate Matrix Spike KQ1705327-08 | | | % Rec Limits | RPD | RPD Limit |
|--------------|---------------|------------------------------|--------------|-------|--|--------------|-------|--------------|-----|-----------|
| | | Result | Spike Amount | % Rec | Result | Spike Amount | % Rec | | | |
| Antimony | 0.047 J | 53.9 | 50.0 | 108 | 54.9 | 50.0 | 110 | 70-130 | 2 | 20 |
| Arsenic | 197 | 238 | 50.0 | 82 | 240 | 50.0 | 85 | 70-130 | <1 | 20 |
| Barium | 618 | 682 | 100 | 64 # | 686 | 100 | 68 # | 70-130 | <1 | 20 |
| Beryllium | 26.5 | 26.7 | 2.50 | 8 # | 27.9 | 2.50 | 53 # | 70-130 | 4 | 20 |
| Cadmium | 0.010 J | 24.8 | 25.0 | 99 | 24.9 | 25.0 | 99 | 70-130 | <1 | 20 |
| Chromium | 38.2 | 45.6 | 10.0 | 74 | 45.4 | 10.0 | 73 | 70-130 | <1 | 20 |
| Cobalt | 145 | 161 | 25.0 | 65 # | 163 | 25.0 | 70 # | 70-130 | <1 | 20 |
| Copper | 193 | 195 | 12.5 | 21 # | 196 | 12.5 | 24 # | 70-130 | <1 | 20 |
| Lead | 29.5 | 76.7 | 50.0 | 94 | 77.3 | 50.0 | 96 | 70-130 | <1 | 20 |
| Nickel | 195 | 210 | 25.0 | 59 # | 212 | 25.0 | 66 # | 70-130 | <1 | 20 |
| Selenium | 9.3 | 58.0 | 50.0 | 97 | 57.9 | 50.0 | 97 | 70-130 | <1 | 20 |
| Silver | 0.006 J | 11.2 | 12.5 | 89 | 11.4 | 12.5 | 91 | 70-130 | 2 | 20 |
| Thallium | 24.7 | 73.2 | 50.0 | 97 | 73.8 | 50.0 | 98 | 70-130 | <1 | 20 |
| Vanadium | 201 | 214 | 25.0 | 53 # | 216 | 25.0 | 59 # | 70-130 | <1 | 20 |
| Zinc | 470 | 475 | 25.0 | 22 # | 477 | 25.0 | 29 # | 70-130 | <1 | 20 |

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Superset Reference:

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Collected: 04/28/17
Date Received: 04/29/17
Date Analyzed: 05/4/17
Date Extracted: 05/4/17

Duplicate Matrix Spike Summary
Total Metals

Sample Name: STWL04281701
Lab Code: K1704253-001
Analysis Method: 245.1
Prep Method: Method

Units: ug/L
Basis: NA

| Analyte Name | Sample Result | Result | Matrix Spike KQ1705329-06 | | Result | Duplicate Matrix Spike KQ1705329-07 | | % Rec Limits | RPD | RPD Limit |
|--------------|---------------|--------|------------------------------|-------|--------|--|-------|--------------|-----|-----------|
| | | | Spike Amount | % Rec | | Spike Amount | % Rec | | | |
| Mercury | 6.32 | 11.4 | 5.00 | 102 | 10.8 | 5.00 | 89 | 70-130 | 6 | 20 |

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Superset Reference:

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Analyzed: 05/10/17

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1705328-02

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|--------------|-------------------|--------|--------------|-------|--------------|
| Aluminum | 200.7 | 5020 | 5000 | 100 | 85-115 |
| Iron | 200.7 | 2560 | 2500 | 103 | 85-115 |
| Manganese | 200.7 | 1250 | 1250 | 100 | 85-115 |

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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Analyzed: 05/16/17

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1705327-02

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|--------------|-------------------|--------|--------------|-------|--------------|
| Antimony | 200.8 | 54.0 | 50.0 | 108 | 85-115 |
| Arsenic | 200.8 | 50.7 | 50.0 | 101 | 85-115 |
| Barium | 200.8 | 101 | 100 | 101 | 85-115 |
| Beryllium | 200.8 | 2.64 | 2.50 | 106 | 85-115 |
| Cadmium | 200.8 | 25.3 | 25.0 | 101 | 85-115 |
| Chromium | 200.8 | 9.77 | 10.0 | 98 | 85-115 |
| Cobalt | 200.8 | 24.6 | 25.0 | 98 | 85-115 |
| Copper | 200.8 | 12.2 | 12.5 | 98 | 85-115 |
| Lead | 200.8 | 50.3 | 50.0 | 101 | 85-115 |
| Nickel | 200.8 | 24.5 | 25.0 | 98 | 85-115 |
| Selenium | 200.8 | 49.8 | 50.0 | 100 | 85-115 |
| Silver | 200.8 | 11.9 | 12.5 | 95 | 85-115 |
| Thallium | 200.8 | 51.0 | 50.0 | 102 | 85-115 |
| Vanadium | 200.8 | 24.7 | 25.0 | 99 | 85-115 |
| Zinc | 200.8 | 23.5 | 25.0 | 94 | 85-115 |

ALS Group USA, Corp.
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QA/QC Report

Client: AMEC Foster Wheeler E & I (Geomatrix)
Project: Leviathan Mine RI/FS/0013091150
Sample Matrix: Water

Service Request: K1704253
Date Analyzed: 05/04/17

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1705329-02

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|--------------|-------------------|--------|--------------|-------|--------------|
| Mercury | 245.1 | 4.76 | 5.00 | 95 | 85-115 |